

REMARKS

The Office rejected claims 1-6. With this paper, claim 1 is amended, none are canceled, and none are added.

Claim Rejections under 35 USC §103

1. Claims 1-4 are rejected under 35 USC §103(a) as being unpatentable over Yue *et al.* (US 6,461,418, Yue hereinafter) in view of Takamura (JP 2000-096461, Takamura hereinafter).

Amended claim 1 recites a discharging ink for ink jet printing on cloth. The discharging ink comprises (1) a nonionic surfactant having a HLB (hydrophilic/lipophilic balance) value of 9 to 16 and ethylene oxide-added mol number of at most 30, (2) a guanidine weak acid salt and (3) water.

In the discharging ink, the guanidine weak acid salt is used as a discharging agent that draws out dye from the cloth (see page 7, line 23 to page 8, line 5). With a combination of the nonionic surfactant and the guanidine weak acid salt in the discharging ink, and the HLB value of the nonionic surfactant in the claimed range (see Examples 1 and 2), the discharging properties (measured by reflection densities before and after discharging) of the cloth samples are significantly better than that with only the nonionic surfactant (Comparative Example 3) or only the guanidine weak acid salt (Comparative Example 4).

The primary reference, Yue, discloses an aqueous ink jet ink comprising a nonionic surfactant having an HLB value of 4 to 14 for improved spreading of the aqueous ink jet inks on the offset media and offset ink (col. 5, lines 18-24). However, the aqueous ink jet ink of Yue is specifically for printing on offset media and offset ink (such as coated image paper), not for printing on fabrics. Yue neither describes nor suggests that the ink containing the nonionic surfactant can be used as discharging ink in a dye discharging process on clothes.

Further, as the Examiner has already acknowledged, Yue does not disclose or suggest that the ink may include guanidine weak acid salt in a amount of 0.1 by 5% by weight. Therefore, Yue does not teach all the limitations of claim 1 and does not suggest adding a guanidine weak acid salt in the ink.

The secondary reference, Takamura, discloses a dye-discharging agent comprising guanidine carbonate in an amount of 0.1-50.0 wt.%. Takamura, however, does not disclose that the discharging agent is used in ink jet printing, a process that requires special attention to the ink properties (see page 2, lines 20-26 of the instant application). Takamura only teaches using conventional printing methods for textiles ("the print of the print pastes to a textile can be performed by the approach of the arbitration currently performed conventionally, ... " paragraph [0010]). Further, Takamura fails to disclose a nonionic surfactant having the HLB value of 9 to 16.

The Examiner asserts that: "It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Yue *et al.* by the aforementioned teaching of Takamura in order to have a sharp printed image." By analyzing the cited references as above, the Applicant believes that the combination as indicated by the Examiner is not the invention as claimed in claim 1. If Yue uses the modified composition as the Examiner alleged, it would be for the ink jet printing on offset media and offset ink (such as coated image paper), not for printing on fabrics. Besides, none of the references provide the motivation for combining the teachings.

Based on the foregoing, it is believed that claim 1 is patentable. Applicant respectfully requests the rejection of claim 1, and dependent claims 2-4, be reconsidered and withdrawn.

2. Claims 5-6 are rejected under 35 USC §103(a) as being unpatentable over Takamura in view of Yue.

Claim 5 recites a process for preparing discharged polyester fiber cloth. The process comprises a step of injecting a discharging ink on a colored cloth comprising polyester fiber by an ink jet, a step of wet heat treatment or dry heat treatment at 150 to 190°C, and a step of soaping treatment. The discharge ink has the composition as in claim 1.

The Applicant notices that the Examiner has acknowledged that Takamura differs from the claim of the present invention in that the ink having nonionic surfactant having HLB value of 9 to 16, and ethylene oxide (page 3, lines 10-11 of the Office Action). However, the Examiner failed to recognize that Takamura does not disclose that the discharging agent is used in an ink jet printing process. As mentioned above, the ink jet printing is a process that requires special attention to the ink properties. Takamura only teaches using conventional printing methods for textiles. In Takamura, mineral products such as talc and kaolin are used as the absorbing substance. These substances cannot be used in ink jet inks for ink jet printing, because they having large particle size that could easily cause clogging in the nozzles.

In addition, the Examiner's allegation that Takamura discloses that the nonionic surfactant is in amount of 0.01 to 10% by weight in Examples (page 3, lines 7 to 8 of the Office Action) is incorrect. In fact, none of the examples use the nonionic surfactant.

Yue, as mentioned above, only teaches an aqueous ink jet ink specifically for printing on offset media and offset ink (such as coated image paper). The ink composition as disclosed by Yue is not intended for preparing discharged polyester fiber cloth. Yue neither describes nor suggests that the ink containing the nonionic surfactant can be used as discharging ink in a dye discharging process on clothes.

Therefore, the applicant respectfully disagrees with the Examiner's assertion that: "It would have been obvious to one of ordinary skill in the at the time of the invention to modify the ink composition of Takamura by the aforementioned teaching of Yue et al. in order to get the rub resistance, water fastness and lightfastness high quality printed image."

In fact, based on the above analysis, it is not possible to combine Takamura, in

which guanidine carbonate is used as a discharging agent in a conventional printing process for textiles, and Yue, in which nonionic surfactant is used in an ink jet ink for an ink jet printing process on offset media and offset inks, in order to come up with the process as in claim 5. Therefore, claim 5 is believed to be patentable. Applicant respectfully requests the rejection of claim 5, and dependent claim 6, be reconsidered and withdrawn.

Conclusion

For all the foregoing reasons, it is believed that all the claims of the instant application are patentable, and their passage to issue is earnestly solicited. Applicant's agent urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

Date: 12/7/06

WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
755 Main Street, P.O. Box 224
Monroe, Connecticut 06468
Phone: (203) 261-1234

Respectfully submitted,



Shiming Wu
Attorney for the Applicant
Registration No. 56,885